

## **REMARKS/ARGUMENTS**

Claims 1-11 are pending in the present application. Claim 9 has been amended herewith. The listing of the claims beginning on page 2 of this response replaces all prior versions, and listings, of claims in the application.

Claim 9 has been amended in this application. Applicants are not conceding in this application the subject matter removed from amended claims is not patentable over the art cited by the Examiner. The present claim amendments are only for facilitating expeditious prosecution of the application. Applicants respectfully reserve the right to pursue these and other claims in one or more continuation and/or divisional patent applications.

### **I. 35 U.S.C. § 101**

Claims 9-11 stand rejected under 35 U.S.C. § 101 as being directed towards non-statutory subject matter. This rejection is respectfully traversed.

With respect to Claim 9 (and dependent Claims 10 and 11), Applicants have amended such claim to comply with judicial precedent regarding proper statutory subject matter. For example:

“When functional descriptive material is **recorded on some computer-readable medium** it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)(claim to data structure **stored** on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1760 (claim to data structure *per se* held nonstatutory)” (emphasis added by Applicants).

Applicants disavow that portion of the scope of computer readable medium Claims 9-11 that would otherwise cover transitory signals. Claim scope covering other forms of computer readable media (besides transitory signals) that allow Claims 9-11 to meet the requirements of 35 U.S.C. 101 is not intended to be disavowed by the statements herein.

Therefore, the rejection of Claims 9-11 under 35 U.S.C. § 101 has been overcome.

## II. **35 U.S.C. § 103, Obviousness**

Claims 1-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Preboot Execution Environment (PXE) Specification version 2.1, pages 1-40, hereinafter “PXE” in view of Fijolek et al. (U.S. Patent No. 7,068,597), hereinafter “Fijolek” in further view of Bamforth et al. (U.S. Patent No. 6,330,617), hereinafter “Bamforth”. This rejection is respectfully traversed.

The Examiner bears the burden of establishing a prima facie case of obviousness based on prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. *Id.* All words in a claim must be considered in judging the patentability of that claim against the prior art. MPEP 2143.03; *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If the Examiner fails to establish a prima facie case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In the absence of a proper *prima facie* case of obviousness, an applicant who complies with the other statutory requirements is entitled to a patent. *See In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

With respect to Claim 1, such claim recites “receiving, at the server, a dataset of load information associated with an execution load at a boot server”. As can be seen, a server receives a dataset of load information, where such load information is associated with an *execution load at a boot server*.

The Examiner alleges that PXE describes a server receiving a dataset of information associated with available boot servers at page 10. Applicants urge error, as the only active step performed by a server that is described on page 10 is the following:

“the server sends the client a list of appropriate Boot Servers”.

As can be seen, the active server step that is described on page 10 of PXE is the ‘sending’ of information. This cited PXE passage does not describe any type of ‘receiving’ step being performed by a server (per Claim 1 – “receiving, at the server, a dataset”). Thus, for this reason

alone it is urged that Claim 1 has been erroneously rejected due to such prima facie obviousness deficiencies.

Further with respect to Claim 1, such claim recites “in response to receiving the dataset of load information, ordering a list of multiple boot server addresses”. As can be seen, this aspect of Claim 1 is directed to a particular action that is performed *in response to receiving the dataset of load information*.

The Examiner alleges that Fijolek teaches (1) receiving at the server the load information associated with the boot servers, and (2) ordering a list of boot server addresses based on received dataset load information and based on previously received datasets of load information at col. 36, lines 1-25. Applicants show that there, Fijolek states:

Further, according to an exemplary embodiment, the provisioning/access manager 146 redistributes DHCP messages with TFTP requests between a plurality of TFTP servers. The redistribution of TFTP requests between a number of different TFTP servers is especially useful after the power outage when thousands of CMs may re-boot at the same time since a typical TFTP server is only capable to handle around a couple hundred requests per minute. In one embodiment, **each CMTS service area has a list of TFTP servers** associated with the CMTS service area, and the **provisioning/access manager 146 load-balances the TFTP server re-direction across available TFTP servers** and, further, keeps the record of all TFTP server re-directions.

FIG. 19 is a flow chart illustrating an exemplary method 450 for a load balancing of a second protocol server redirections according to an exemplary embodiment.

Referring to FIG. 19, at step 452, a first network device marks a first message from a second network device with an identifier of a network access device. In an exemplary embodiment, the second network device includes the network access device and, thus, the first network device marks the first message with an identifier of the second network device. At step 454, a third network device intercepts the first message prior to any first protocol server receives the first message.

As can be seen, this cited passage describes that (i) each ‘CMTS service area’ has a list of TFTP servers, (ii) a provisioning/access manager load-balances TFTP server redirection across

‘available’ TFTP servers, and (iii) load balancing of server redirections. Importantly, this cited passage does not describe (1) a server ‘receiving’ a dataset of load information associated with an execution load at a boot server, (2) ‘ordering’ a list of boot server addresses, or (3) ordering a list *in response to receiving a (non-taught) dataset of load information*. Instead, it describes at a very high-level - with no implementation details – that a ‘manager’ 146 load-balances TFTP server redirection across ‘available’ TFTP servers. Thus, it is further urged that Claim 1 has been erroneously rejected due to such additional prima facie obviousness deficiencies.

Still further with respect to Claim 1, such claim recites “in response to receiving the first file transfer request, sending a file comprising the ordered list of multiple boot server addresses to the client”. As can be seen, this aspect of Claim 1 is directed to features/characteristics pertaining a file containing an ordered list of boot server addresses – where such list is ordered *based on received datasets of load information*. To the extent that the cited PXE reference describes the sending of a list to a client, the list is not ‘ordered’ as the client is responsible for processing such list that it receives (PXE page 10). Thus, it is further urged that Claim 1 has been erroneously rejected as the combined teachings of the cited references do not describe an *ordered* list – where such list is ordered based on *received datasets of load information* - being sent to a requesting client.

Applicants initially traverse the rejection of Claims 2 and 3 for reasons given above with respect to Claim 1 (of which Claims 2 and 3 depend upon).

Further with respect to Claim 3, such claim recites “prior to the step of receiving the first file transfer request: receiving, at the server, a second file transfer request from the client; and in response to receiving the second file transfer request, sending an initial network bootstrap program to the client, wherein the initial network bootstrap program, when executed at the client, generates the first file transfer request”. As can be seen, Claim 3 is directed to characteristics/features pertaining to an initial network bootstrap program, where such initial network bootstrap program is sent to the client and, when executed at the client, generates the first file transfer request of Claim 1. Since this initial bootstrap program generates the first file transfer request, it necessarily follows that this initial network bootstrap program processing necessarily occurs before the first file transfer request is received, since it must be generated before it can be received.

The Examiner alleges that all aspects of Claim 3 are taught by PXE at pages 14-16. Applicants urge clear error, as the teachings of these cited passages describe that a client selects a boot server from a list of boot servers and then proceeds to request an executable file from such selected boot server – and therefore this description does not describe operations that occur ‘*prior to* the step of receiving the first file transfer request’ because the ‘first file transfer request’ has *already been received* such that the client has been provided with the list of boot servers for which such particular boot server selection is made. Specifically, Claim 1 recites “in response to receiving the *first file transfer request*, sending a file comprising the ordered list of multiple boot server addresses to the client” – and this is the list being processed by the client per the teachings on PXE pages 14-16. Therefore, the PXE teachings on pages 14-16 are performed **after** the client has received a host list, and therefore these teachings are performed **after** having received the first file transfer request since the host list is received in response to receiving such first file transfer request – meaning the receiving of the first file request has *already occurred when the client receives the list of boot servers*. Therefore, the description on pages 14-16 of PXE is not performed *before* a first file transfer request has already been received since the host list that directly results from receiving such request has already been sent back to the client when the client performs the executable code request described on pages 14-16 of PXE. Thus, it is further urged that Claim 3 has been erroneously rejected due to such additional prima facie obviousness deficiencies.

Applicants initially traverse the rejection of Claims 4-11 for similar reasons to those given above with respect to Claim 1.

Applicants further traverse the rejection of Claims 7 and 11 for similar reasons to the further reasons given above with respect to Claim 3.

Therefore, the rejection of Claims 1-11 under 35 U.S.C. § 103(a) has been overcome.

### **III. Conclusion**

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

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